

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
16 June 2005 (16.06.2005)

PCT

(10) International Publication Number
WO 2005/055227 A1

(51) International Patent Classification⁷: **G11B 20/00**,
20/12, 7/007, 23/36

(21) International Application Number:
PCT/IB2004/052545

(22) International Filing Date:
25 November 2004 (25.11.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
03104509.9 3 December 2003 (03.12.2003) EP

(71) Applicant (for all designated States except US): **KONIN-
KLIJKE PHILIPS ELECTRONICS N.V.** [NL/NL];
Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **TALSTRA, Jo-
han, C.** [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA
Eindhoven (NL). **AKKERMANS, Antonius, H., M.**
[NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven
(NL). **DENISSEN, Adrianus, J., M.** [NL/NL]; c/o Prof.
Holstlaan 6, NL-5656 AA Eindhoven (NL). **LAMBERT,
Nicolaas** [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA
Eindhoven (NL). **STARING, Antonius, A., M.** [NL/NL];
c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). **DE**

BOER, Jan, H. [NL/NL]; c/o Prof. Holstlaan 6, NL-5656
AA Eindhoven (NL).

(74) Agents: **BEKKERS, Joost, J., J. et al.**; Prof. Holstlaan 6,
NL-5656 AA Eindhoven (NL).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

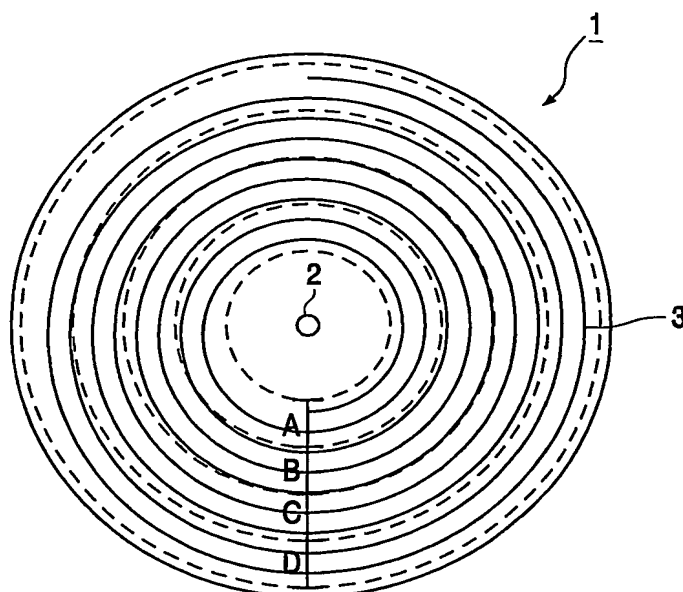
(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE,
SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— as to applicant's entitlement to apply for and be granted
a patent (Rule 4.17(ii)) for the following designations AE,
AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ,

[Continued on next page]

(54) Title: SIDE-CHANNEL FOR RECORD CARRIERS WITH SPIRAL TRACKS



(57) Abstract: In order to create a record carrier having a side-channel which cannot be copied with a channel-bit recorder, the record carrier (1) has a modulated spiral. By modulating one or more of the spiral parameters, like the channel bit length or the track pitch, a side-channel is created. If a record carrier having such a side-channel is copied using a channel-bit recorder, the information present in the side-channel is lost. The number of bits to be stored in the modulated spiral can be selected as desired; also the way in which the bits are present can be selected; the bits can e.g. can be stored in different bands (A,B,C,D) present on the record carrier, in which band the spiral parameter modulated can be kept constant.



CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU,

IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.